AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A composition ~~consisting essentially of~~ comprising an isolated~~non-amyloidogenic~~ non-infectious, non-pathogenic mammalian prion protein selected from the group consisting of mouse, bovine, deer, elk, and sheep prion protein and ~~consisting of one of an adjuvant and~~ a delivery vehicle or carrier, wherein[[:]] ~~the isolated mammalian prion protein is selected from the group consisting of bovine, deer, elk, and sheep prion protein; and~~ the composition is suitable for mucosal administration and, when introduced to a mammal's mucosal immune system, elicits a ~~humoral~~ primarily Th-2-type immune response against an endogenous prion protein of said mammal that is associated with a mucosal IgA humoral immune response and any concomitant immunoglobulin counterpart in other bodily fluids ~~when introduced to a mammalian mucosal immune system~~, and is not associated with a primarily Th-1-type cytotoxic T-lymphocyte response.

2. (Canceled)

3. (Previously Presented) The composition of Claim 1, wherein the isolated mammalian prion protein consists of an amino acid sequence which is a member of the group consisting of residues 93-156 of one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4 or SEQ ID NO:8; and residues 123-225 of one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, or SEQ ID NO:8.

4. (Original) The composition of Claim 3, wherein all amino acid residues are D-amino acids.

5-8. (Canceled)

9. (Currently Amended) The composition of Claim 1, wherein ~~the adjuvant is cholera toxin subunit B (CT-B) or heat-labile enterotoxin (LT) and~~ the delivery vehicle is aluminum hydroxide.

10. (Currently Amended) The composition of Claim [[9]] 1, wherein the prion protein is covalently attached to ~~the~~ a cholera toxin subunit B.

11. (Withdrawn) A method of preventing or treating a prion disease, comprising mucosal administration of the vaccine of Claim 1 to a mammalian subject in need thereof.

12. (Withdrawn) The method of Claim 11, wherein the mammalian subject is a member of the group consisting of bovine, deer, elk, and sheep.

13. (Withdrawn) The method of Claim 11, wherein the mucosal administration is a member selected from the group consisting of oral, intragastric, intranasal, rectal and intraocular administration.

14. (Canceled)

15. (Withdrawn) The method of Claim 11, wherein the subject is bovine and the prion disease is bovine spongiform encephalopathy.

16. (Withdrawn) The method of Claim 11, wherein the subject is deer or elk and the prion disease is chronic wasting disease.

17. (Withdrawn) The method of Claim 11, wherein the subject is sheep and the prion disease is scrapie.

18. (Withdrawn) The method of Claim 11, further comprising repeating the mucosal administration at least once.

19. (Withdrawn) The method of Claim 18, comprising repeating the mucosal administration within one month after the first administration.

20. (Currently Amended) A composition comprising an attenuated bacterium microorganism consisting of one of a Shigella strain and a Salmonella strain transformed with a vector capable of

expressing ~~an isolated non-amyloidogenic~~ a non-infectious, non-pathogenic mammalian prion protein~~, wherein: the isolated mammalian prion protein is~~ selected from the group consisting of mouse, bovine, deer, elk, and sheep prion protein[[;]], wherein the composition is suitable for mucosal administration and ~~the composition,~~ when introduced to a mammal's mucosal immune system, elicits a ~~humoral~~ primarily Th-2-type immune response against an endogenous prion protein of said mammal that is associated with ~~an~~ a mucosal IgA humoral immune response and any concomitant immunoglobulin counterpart in other bodily fluids ~~when introduced to a mammalian mucosal immune system~~, and is not associated with a primarily Th-1-type cytotoxic T-lymphocyte response.

21. (Canceled)

22. (Previously Presented) The composition of Claim 20, wherein the prion protein consists of an amino acid sequence which is a member of the group consisting of residues 93-156 of one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:8.

23. (Original) The composition of Claim 22, wherein all amino acid residues are D-amino acids.

24-27. (Canceled)

28. (Previously Presented) The composition of Claim 51, wherein the Salmonella strain is of a strain selected from Salmonella typhimurium LVR01 and SL3261, Salmonella enteritidis LVR02, and Salmonella typhi Ty21a.

29. (Withdrawn) A method of preventing or treating a prion disease, comprising mucosal administration of the vaccine of Claim 20 to a mammalian subject in need thereof.

30. (Withdrawn) The method of Claim 29, wherein the mammalian subject is a member of the group consisting bovine, deer, elk, and sheep.

31. (Withdrawn) The method of Claim 29, wherein the mucosal administration is a member selected from the group consisting of oral, intragastric, intranasal, rectal and intraocular administration.

32. (Canceled)

33. (Withdrawn) The method of Claim 29, wherein the subject is bovine and the prion disease is bovine spongiform encephalopathy.

34. (Withdrawn) The method of Claim 29, wherein the subject is deer or elk and the prion disease is chronic wasting disease.

35. (Withdrawn) The method of Claim 29, wherein the subject is sheep and the prion disease is scrapie.

36. (Withdrawn) The method of Claim 29, further comprising repeating the mucosal administration at least once.

37. (Withdrawn) The method of Claim 36, comprising repeating the mucosal administration within one month after the first administration.

38-39. (Canceled)

40. (Withdrawn) A method for preventing prion disease comprising administering a priming dose of the pharmaceutical composition of Claim 38 by an intradermal, subcutaneous, intramuscular, or intravenous route, and subsequently administering a booster dose of the pharmaceutical composition by an oral, nasal, intragastric, rectal, or intraocular route.

41-44. (Canceled)

45. (Previously Presented) The composition of Claim 20, wherein the prion protein consists of an amino acid sequence which is a member of the group consisting of residues 123-225 of one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:8.

46. (Original) The composition of Claim 45, wherein all amino acid residues are D-amino acids.

47-50. (Canceled)

51. (Previously Presented) The composition of Claim 20, wherein the attenuated bacterium microorganism is a Salmonella strain.

52. (Previously Presented) The composition of Claim 20, wherein the attenuated bacterium microorganism is a Shigella strain.

53. (Previously Presented) The composition of any one of Claims 3, 22, or 45, wherein at least one amino acid residue is a D-amino acid residue.

54-55. (Canceled)

56. (New) The composition of Claim 1, further comprising cholera toxin subunit B (CT-B) or heat-labile enterotoxin (LT).